

19981024.ba v02_n272.bam.981024

>From ???@??? Sat Oct 24 03:52:50 1998
Message-Id: <199810240534.AAA20193@sco.theporch.com>
Date: Sat, 24 Oct 1998 00:33:50 CDT
Subject: BOATANCHORS digest 2272

BOATANCHORS Digest 2272

Topics covered in this issue include:

- 1) Re: Operating BIG tubes w/ low filament voltage
by "Arden Allen" <gumbear@pacbell.net>
- 2) Re: ITT Mackay 3010C Receiver
by Edward Zeranski <ejz@nosc.mil>
- 3) WW2 aircraft BA standoffs
by Ray Mote <rmote@rain.org>
- 4) Wanted & FS
by Chip Owens <owens@atd.ucar.edu>
- 5) FS/FT: "Extra" tubes
by Sandy W5TVW <ebjr@worldnet.att.net>
- 6) Re: Operating BIG tubes w/ low filament voltage
by "James C. Garland" <4cx250b@miavx1.acs.muohio.edu>
- 7) RBZ
by Don <71333.144@compuserve.com>
- 8) Knob needed
by "Joseph W. Pinner" <kc5ijd@sprintmail.com>
- 9) 4x4 of 4-1000's, well ok.....
by Larry Kayser <kayser@rideau.net>
- 10) New Ballast Tube Reference Page
by Dexter Francis <cwest@xmission.com>
- 11) Re: Operating BIG tubes w/ low filament voltage
by Charles Ring <charlesr@infonline.net>
- 12) Re: Elmac 1070 Power Supply - Schematic
by Bob/WB0AUQ <brainbol@lawrence.ks.us>
- 13) Boatanchor web page update
by "P. J. Rovero" <provero@connix.com>
- 14) NEED QST ARTICLE COPIES
by JOHN_SEHRING.parti@ecunet.org (JOHN SEHRING)
- 15) BC 654-A RECEIVER QUESTION
by JOHN_SEHRING.parti@ecunet.org (JOHN SEHRING)
- 16) MANUAL FOR BOGEN DB 212 AUDIO AMP
by JOHN_SEHRING.parti@ecunet.org (JOHN SEHRING)
- 17) Re: RBZ
by Kargokult@aol.com
- 18) Re: BC 654-A RECEIVER QUESTION
by WF2U <mbendror@villagenet.com>
- 19) Re: Re S-20R

by John Kolb <jlkolb@cts.com>
20) Re: Dexters RAO-? I.D.
by John Kolb <jlkolb@cts.com>
21) Re: HALLI S-20R
by Henry van Cleef <vancleef@netcom.com>

Message-Id: <199810231431.HAA12604@mail-gw6.pacbell.net>
From: "Arden Allen" <gumbear@pacbell.net>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Operating BIG tubes w/ low filament voltage
Date: Fri, 23 Oct 1998 07:33:46 -0700
MIME-Version: 1.0
Content-Type: text/plain; charset=ISO-8859-1
Content-Transfer-Encoding: 7bit

Hi Bill;

> Can someone tell me what the problem is with operating
> a big tube such as a 3CX10,000A7 at a lower filament voltage
> for lower power operation.

Well one argument I've read is that with lower heater voltage there is a less dense space charge (electron cloud) protecting the cathode from positive ion bombardment. Another is that the space charge is what does the actual "emitting" of electrons; emission from the cathode (because of zilch space charge) causes the oxide coating to be stripped from the cathode. Probably a combination of both causes premature failure of the cathode. High plate current causes depletion of the space charge so lower temperature means you have less protection for the cathode under high power output conditions. To save your tube at lower cathode temperatures lower plate voltage and maximum drive limit. Your tube will probably last longer than you.

Arden Allen KB6NAX Vallejo, CA gumbear@pacbell.net

Message-Id: <3.0.1.32.19981023082303.008ec180@marlin.nosc.mil>
Date: Fri, 23 Oct 1998 08:23:03 -0700
To: Old Tube Radios <boatanchors@theporch.com>
From: Edward Zeranski <ejz@nosc.mil>
Subject: Re: ITT Mackay 3010C Receiver
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

At 04:40 PM 10/22/98 +0000, you wrote:
>At 11:37 AM 10/22/98 -0400, you wrote:
>>Hi Sandy,

>>
> Things to look out for when considering the purchase of one:
> 1.) The "fiberglass tape" dial system. Look out for enlarged or
>enlongated sprocket holes in the "tape" itself.

Sandy and BA Folk,

I mentioned this to somebody about a year or two ago as a possible fix for the 16mm dial tape. There is 16mm repair tape for film repair which has the sprocket holes. If the pitch is the same for the film as the RX it could save a basket case dial tape. The 16mm film goes thru the projector a lot faster than tuning the RX so the tape should last . Just a thought.

Ed Zeranski This is a private opinion or statement.
home email: ezeran@cris.com

Date: Fri, 23 Oct 1998 09:40:04 -0700 (PDT)
From: Ray Mote <rmote@rain.org>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: WW2 aircraft BA standoffs
Message-ID: <Pine.SUN.4.05.9810230933520.14567-100000@coyote.rain.org>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

Ran across the 3-inch standoff insulators used in WW2 military aircraft, mostly for antenna leads on the "liaison" (BC-375, etc.) transmitters in the C&H Sales catalog. At \$1 apiece, it's not gonna bust your budget. :-) Their part number is MI9005, in the "miscellaneous" section of the catalog. These are the bullet-shaped insulators with a transverse 3/8" diameter hole just behind the "nose", where the bead-covered wire goes through. Mounts at flat end with 10-24 screw.

You can email 'em at <candhsales@earthlink.net>, go via their website at <http://www.candhsales.com>, or call 'em at (800) 325-9465. They're in Pasadena, CA and have been in the surplus business since 1948.

73....Ray Mote, K5FKT <rmote@rain.org> Oxnard, CA

From: Chip Owens <owens@atd.ucar.edu>
Message-Id: <199810231726.LAA23004@ale.atd.ucar.edu>
Subject: Wanted & FS
To: Old Tube Radios <boatanchors@theporch.com>
Date: Fri, 23 Oct 1998 11:26:44 -0600 (MDT)
MIME-Version: 1.0
Content-Type: text/plain; charset=US-ASCII

Content-Transfer-Encoding: 7bit

Wanted: I'm looking for some knobs as used on RCA equipment.

These are black fluted knobs with skirt. With pointer molded in, or just the ones without the pointer, either way is okay. I'm after the smaller ones which measure 1 1/2" across the back of the skirt. They may carry a part number-molded into the knob: 16A40. Logo showing HDCO is also molded in. I'd also like the larger ones which measure 2 1/8" across the skirt (measured from the back side of the knob) Prefer new-old-stock knobs. The large ones are the type used on RCA broadcast equipment. The smaller ones are used on the RBB/RBC receivers.

FS or trade: Tube Manual. Sylvania 12th edition, first printing.

I don't see a date on it. Good condition, in binder.
I'll trade for some new-old-stock RCA knobs as described above, or will take offers.

Thanks, Chip, NW00

Mime-Version: 1.0

Content-Type: text/plain; charset="us-ascii"

To: Old Tube Radios <boatanchors@theporch.com>

From: Sandy W5TVW <ebjr@worldnet.att.net>

Subject: FS/FT: "Extra" tubes

Message-Id: <19981023173224.QPUP4146@LOCALNAME>

Date: Fri, 23 Oct 1998 17:32:24 +0000

Hello all,

I am in the process of taking inventory of my tube stock aquired over the years. I have quite a few items that I haven't "boatanchor" gear they are for! My "miniature tube" inventory is now completed, but octal/etc. receiving tubes and large transmitting tubes are yet to be done.

If you have some need and possibly some tube trading material, let me know what you need. I'd *rather* trade than just sell outright. Let me know your requirements, and I 'll send you a "want list".

Eventually, I'll have a complete list of what I have for trade/sale, hopefully in the next week or so.

73,

E. V. Sandy Blaize, W5TVW

"Boat Anchors collected, restored, repaired, traded and used!"

417 Ridgewood Drive

Metairie, LA., 70001

Looking for a Hallicrafters SR-75, SR-34**

*** Also surplus TRC-10 Transmitter/Receiver *****

Message-Id: <3.0.1.32.19981023133659.006bbff8@miavx1.muohio.edu>

Date: Fri, 23 Oct 1998 13:36:59 -0400

To: Old Tube Radios <boatanchors@theporch.com>

From: "James C. Garland" <4cx250b@miavx1.acs.muohio.edu>

Subject: Re: Operating BIG tubes w/ low filament voltage

Mime-Version: 1.0

Content-Type: text/plain; charset="us-ascii"

At 09:25 AM 10/23/98 -0400, you wrote:

> Can someone tell me what the problem is with operating
> a big tube such as a 3CX10,000A7 at a lower filament voltage
> for lower power operation.

> 73

> Bill wa4lav

>

Interesting question, Bill, and one I have wondered about myself. A few years ago I built a homebrew HF amplifier, using an 8877/3CX1500A7 triode. In order to preserve the life of the VERY expensive tube, I carefully set the filament voltage at the low end of the range specified by EIMAC (4.75V) for a nominal 5.00V filament. Shortly after finishing the amplifier, I moved to a new QTH in the country, where the AC line voltage was somewhat lower, but neglected to check the filament voltage. To my dismay, the amplifier showed a rapid, persistent drop in power output. In essence, it wouldn't load to as high a plate current as it had been designed for. I'd guess this decline occurred over about 50 hours of operation. In trying to diagnose the problem, I discovered that the filament voltage was only about 4.6V. I put in a new tube (OUCH!), raised the filament voltage to 5.0V, and had no further problem. The original tube was irreversibly damaged by the low filament voltage, with output reduced to about 75 percent of its nominal rating. Raising the filament voltage of the damaged tube did no good.

Obviously, in an indirectly heated cathode tube, underheating the cathode greatly reduces the electron emissivity. This phenomenon evidently leads to physical degradation of the cathode material, which permanently damages it. I don't know what the failure mechanism is, but I can attest that it's a very real effect. I'm careful now to design amplifiers with filament voltage set above the minimum in order to provide a safety margin.

73,

Jim Garland W8ZR

Date: Fri, 23 Oct 1998 14:27:22 -0400
From: Don <71333.144@compuserve.com>
Subject: RBZ
To: Old Tube Radios <boatanchors@theporch.com>
Message-ID: <199810231429_MC2-5DB4-62FA@compuserve.com>
MIME-Version: 1.0
Content-Transfer-Encoding: 7bit
Content-Type: text/plain; charset=us-ascii
Content-Disposition: inline

The RBZ may be clandestine...but I have trouble buying that idea. Why would the earphones be designed into a skull cap as though to be worn under a helmet? Also, why an olive drab color scheme if the set was to be used by civilians?

I'm sure that any really small radio that was available in any quantity was a candidate for clandestine use during the dark times of the war. But this just doesn't add up...

I have copies of the manual for this set if anyone needs a copy of my copy. BTW, this radio is one of the relatively few that uses permeability tuning...

73, Don

Message-Id: <199810231833.LAA05233@crow.prod.itd.earthlink.net>
Subject: Knob needed
Date: Fri, 23 Oct 1998 13:33:22 -0500
From: "Joseph W. Pinner" <kc5ijd@sprintmail.com>
To: Old Tube Radios <boatanchors@theporch.com>
Mime-Version: 1.0
Content-Type: text/plain; charset="US-ASCII"

I need a couple of the small 1/2 inch black teardrop pointer knobs for 1/8 inch shafts.

Let me know if you can help.

73
Joseph Pinner +
201 Ruthwood Drive
Lafayette, LA 70503

KC5IJD

EMail: kc5ijd@net-connect.net

Message-Id: <2.2.32.19981023202616.006e7b7c@rideau.net>

Mime-Version: 1.0

Content-Type: text/plain; charset="us-ascii"

Date: Fri, 23 Oct 1998 16:26:16 -0400

To: Old Tube Radios <boatanchors@theporch.com>

From: Larry Kayser <kayser@rideau.net>

Subject: 4x4 of 4-1000's, well ok.....

David:

Two places to look.

There have been a lot of "retubing" of large FM transmitters in recent years, I obtained a Gates 7.5 V at 65 Amp transformer a few years ago this way, the only issue was that it wanted a 220V primary but you can fake that with a 1/1 isolations transformer if you need to, but you probably will have, or should have (!) a 220 feed near by anyway.

Second source is to look at some of the MONSTER transformers for 5V computer supplies that came from DEC Mainframe computers. These usually do not have center taps so get two the same and use a Variac to set the voltage.

Also there is no need to go for 65A you can go for 15 volts and put the tubes in series parallel with each other.

Larry
VA3LK

Message-ID: <3630B4C3.6D3221B1@xmission.com>

Date: Fri, 23 Oct 1998 16:54:28 +0000

From: Dexter Francis <cwest@xmission.com>

MIME-Version: 1.0

To: Old Tube Radios <boatanchors@theporch.com>

Subject: New Ballast Tube Reference Page

Content-Type: text/plain; charset=us-ascii; x-mac-type="54455854"; x-mac-creator="4D4F5353"

Content-Transfer-Encoding: 7bit

Greetings all -

I have just added a new reference page to the CWTS Web Site.
It's a transcription of the 1982 Amperite Ballast Voltage and Current

Regulating Tube Tables.

Now you can figure out what the characteristics are of those 11A10's and 30R4's are!

It's at: http://www.xmission.com:80/~cwest/Reference/Ballast_ref.html

Hope y'all find it useful.

-- df

Looking to Buy - Sell - Trade or Swap Tubes or BA Gear?

Visit our Web Page @ <http://www.xmission.com/~cwest>

Message-ID: <363112D3.610F@infonline.net>
Date: Fri, 23 Oct 1998 19:35:47 -0400
From: Charles Ring <charlesr@infonline.net>
MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
CC: boatanchors@theporch.com
Subject: Re: Operating BIG tubes w/ low filament voltage
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

James C. Garland wrote:

>

> At 09:25 AM 10/23/98 -0400, you wrote:

> > Can someone tell me what the problem is with operating

> >a big tube such as a 3CX10,000A7 at a lower filament voltage

> >for lower power operation.

> > 73

> > Bill wa4lav

> >

> Interesting question, Bill, and one I have wondered about myself. A few
> years ago I built a homebrew HF amplifier, using an 8877/3CX1500A7 triode.
> In order to preserve the life of the VERY expensive tube, I carefully set
> the filament voltage at the low end of the range specified by EIMAC (4.75V)
> for a nominal 5.00V filament. Shortly after finishing the amplifier, I moved
> to a new QTH in the country, where the AC line voltage was somewhat lower,
> but neglected to check the filament voltage. To my dismay, the amplifier
> showed a rapid, persistent drop in power output. In essence, it wouldn't
> load to as high a plate current as it had been designed for. I'd guess this
> decline occurred over about 50 hours of operation. In trying to diagnose
> the problem, I discovered that the filament voltage was only about 4.6V. I
> put in a new tube (OUCH!), raised the filament voltage to 5.0V, and had no
> further problem. The original tube was irreversibly damaged by the low
> filament voltage, with output reduced to about 75 percent of its nominal
> rating. Raising the filament voltage of the damaged tube did no good.

>
> Obviously, in an indirectly heated cathode tube, underheating the cathode
> greatly reduces the electron emissitivity. This phenomenon evidently leads
> to physical degradation of the cathode material, which permanently damages
> it. I don't know what the failure mechanism is, but I can attest that it's
> a very real effect. I'm careful now to design amplifiers with filament
> voltage set above the minimum in order to provide a safety margin.
>
> 73,
>
> Jim Garland W8ZR

Broadcast practice is to operate a new tube at exactly the rated filament voltage for the first 100 hours, and then reduce the voltage to just above where output starts to go down. I'm not real sure how that would translate into ham practice where the 100 hours would be split into many pieces and where much time is spent with filament heated but no plate voltage.

I've used the 8877 in FM broadcast service and have seen an odd problem with it, an intermittent short that was hard to believe when it happened. Apparently that tube can develop tiny metal fragments that can fly around inside the tube and cause a short that goes away only to return. It caused me several late night trips to a transmitter site to reset the circuit breaker before suspecting the tube. I'd always expected a shorted tube to stay shorted.

73 de W3NU, C. E. WPIC/WYFM

Message-ID: <36311613.7304@lawrence.ks.us>
Date: Fri, 23 Oct 1998 18:49:39 -0500
From: Bob/WB0AUQ <brainbol@lawrence.ks.us>
MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Elmac 1070 Power Supply - Schematic
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Tom, et al,
Pin out of my M-1070 (6/12vdc/115ac supply), should be same as a/c unit only:

- 1--Primary on/off sw.
- 2--Primary on/off sw.
- 3--PTT (gnd thru mic).
- 4--+250vdc for rcvr, 100 ma continuous.
- 5--+500vdc for xmtr, 250 ma 50% duty.
- 6--+250vdc for xmtr, 75 ma 50% duty.

7--control voltage.
8--filament (rcvr and xmtr), 6v/8.5A, 12v/4.25A.
9--+105vdc regulated, 20 ma continuous.
10--ground.
11--nc
Manual says antenna relay connects between 3 and 7, relay coil should be
6v if battery input is 6, else 12vdc if input is either 12vdc or 115vac.
--
73,
Bob/WB0AUQ AMI #213 SPAM #1162 FISTS #1905
mailto:brainbol@sunflower.com
<http://www.sunflower.com/~brainbol/index.html>
Dr. Lee DeForest wraps it up at:
<http://www.sunflower.com/~brainbol/Audio/DeForest.wav> [audio]

Date: Fri, 23 Oct 1998 20:17:49 -0400 (EDT)
From: "P. J. Rovero" <provero@connix.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Boatanchor web page update
Message-ID: <Pine.BSI.3.95.981023201209.13345A-100000@comet.connix.com>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

My pages pertaining to boatanchor receivers::

Hammarlund SP-200 series
RCA SRR-13 (and related radios)
Collins R-391 and R-392
Hallicrafters SX-122
Hammarlund HQ-145

have been updated. Material on SX-122 and HQ-145 is new,
minor mods to other pages. There are new shack and shop
photos, too.

Still looking for more info on R-1451 and Nida MiniLab 400,
plus any additional insight on the featured boatanchor
receivers.

Take care,

P. J. "Josh" Rovero	email: provero@connix.com
Oceanographer	work: rovero@sonalysts.com
Meteorologist	radio: KK1D
Curmudgeon at Large	web: http://www.connix.com/~provero/

MIME-Version: 1.0
Content-Type: text/plain; charset="US-ASCII"
Content-Transfer-Encoding: 7bit
Date: Fri, 23 Oct 1998 21:47:52 -0400 (EDT)
Subject: NEED QST ARTICLE COPIES
To: Old Tube Radios <boatanchors@theporch.com>
From: JOHN_SEHRING.parti@ecunet.org (JOHN SEHRING)
Message-ID: <9810232147.aa19062@pcusa01.ecunet.org>

To: boatanchors@theporch.com

A little help, please? I need copies of following articles:

- 1) QST 10/88, p. 36, Rich Measures' article on parasitic suppression for amp tubes.
- 2) QST 4/79, p. 30, "Save money--build your own RF choke"

Thanx!

-John Sehring (12:43 pm Fri, Oct 23, 1998 at Custer, SD USA) ucc wb2eqg

MIME-Version: 1.0
Content-Type: text/plain; charset="US-ASCII"
Content-Transfer-Encoding: 7bit
Date: Fri, 23 Oct 1998 21:47:53 -0400 (EDT)
Subject: BC 654-A RECEIVER QUESTION
To: Old Tube Radios <boatanchors@theporch.com>
From: JOHN_SEHRING.parti@ecunet.org (JOHN SEHRING)
Message-ID: <9810232147.aa19065@pcusa01.ecunet.org>

To: boatanchors@theporch.com

What might you all be able to tell me about the BC 654-A, Receiver part?

Got one, don't know nuthin' 'bout it! Thanx.

-John Sehring (12:48 pm Fri, Oct 23, 1998 at Custer, SD USA) ucc wb2eqg

MIME-Version: 1.0
Content-Type: text/plain; charset="US-ASCII"
Content-Transfer-Encoding: 7bit
Date: Fri, 23 Oct 1998 21:47:53 -0400 (EDT)
Subject: MANUAL FOR BOGEN DB 212 AUDIO AMP
To: Old Tube Radios <boatanchors@theporch.com>
From: JOHN_SEHRING.parti@ecunet.org (JOHN SEHRING)

Message-ID: <9810232147.aa19068@pcusa01.ecunet.org>

To: boatanchors@theporch.com

Looking for service manual for a Bogen DB 212 stereo audio amp. Uses 4@ 6V6's as power amps for the 2 channels.

Thank you all.

-John Sehring (1:04 pm Fri, Oct 23, 1998 at Custer, SD USA) ucc wb2eqg

From: Kargokult@aol.com
Message-ID: <13312a0d.36313b98@aol.com>
Date: Fri, 23 Oct 1998 22:29:44 EDT
To: Old Tube Radios <boatanchors@theporch.com>
Mime-Version: 1.0
Subject: Re: RBZ
Content-type: text/plain; charset=US-ASCII
Content-transfer-encoding: 7bit

In a message dated 98-10-23 14:32:28 EDT,
71333.144@compuserve.com writes:

> The RBZ may be clandestine...but I have trouble buying
> that idea. Why would the earphones be designed into a skull
> cap as though to be worn under a helmet? Also, why an olive
> drab color scheme if the set was to be used by

---please recall that this receiver was designed firstly as a
U S Marine Corps, "Raider Receiver". the color scheme
and skullcap headhone assy. was not designed to appeal to
any civilian market. the "raider" concept, and the 1-way radio
idea, were soon enuff abandoned, leaving a number, most
of the radios already produced, with no apparent use.

> civilians? I'm sure that any really small radio that was available
> in any quantity was a candidate for clandestine use during the
> dark times of the war. But this just doesn't add up...

---how many other "vestpocket" receivers of the WW2 era can
you name?
recall that the supposed clandestine-listening RBZ is the
modified tuning range one. what is there to not add up?
regards, hue

Message-Id: <199810240340.XAA27410@vnet.villagenet.com>

Date: Fri, 23 Oct 1998 23:41:19 -0400
To: Old Tube Radios <boatanchors@theporch.com>
From: WF2U <mbendror@villagenet.com>
Subject: Re: BC 654-A RECEIVER QUESTION
Mime-Version: 1.0
Content-Type: text/plain; charset="iso-8859-1"
Content-Transfer-Encoding: 8bit
Content-Transfer-Encoding: 8bit

At 09:47 PM 10/23/98 -0400, you wrote:

>To: boatanchors@theporch.com

>

>What might you all be able to tell me about the BC 654-A, Receiver part?

>

>Got one, don't know nuthin' 'bout it! Thanx.

>

> -John Sehring (12:48 pm Fri, Oct 23, 1998 at Custer, SD USA) ucc wb2eqg

Hi John,

The BC-654A receiver is part of the whole BC-654A (also known as SCR-284A) field radio from WW2. The radio is the predecessor of the GRC-9 (and the BC-1036).

The receiver is normally powered either by a battery pack or the PE-104 vibrator power pack which is switchable between 6VDC and 12VDC input. The frequency coverage is 3750 to 5850 KHz. The IF frequency is 455 KHz. The IF selectivity is 5 KHz at the 6 db points and 21 KHz at the 60 db points. The audio output is 4000 ohms. AM sensitivity: 3.5 microvolt input (30% modulation at 400Hz) should produce 10 mW audio at 10:1 signal-to-noise ratio.

CW sensitivity: 0.5 microvolt input produces 10 mW audio at 10:1 signal-t-noise ratio.

The tube lineup is:

1N5GT RF amplifier

1A7GT converter

1N5GT 1st. IF amplifier

1N5GT 2nd. IF amplifier

3Q5GT BFO

1H5GT detector. AVC and 1st. audio

3Q5GT audio output.

Input voltages: pinout on the octal battery/PE104 octal connector:

pin 1: +1.5V, +51V, -84V and +6 or +12V input to the power pack,(this is the common point all the other voltages are referenced to, called "radio ground" but it's not the actual chassis ground.)

pin 2: no connection

pin 3 and 7: -6V input to the power pack for 6V operation
pin 4: -1.5V
pin 5: +84V
pin 6: -12V input to the power pack with 12VDC operation
pin 8: -51V

The function switch for the receiver is on the transmitter, so you'll have to rig up the switch externally if you only have the receiver.

In actual operation the receiver is working nicely with a 10-15 ft. long whip or a piece of wire. I've listened with it to the 75M AM activity very comfortably using a 10 ft. wire strung up in my garage....

I hope this info will get you started getting the receiver into operation.
Good luck,

73's from†† Meir, WF2U

Collector and user of vintage amateur and military radio equipment.
Collector and user of vintage horse/cavalry equipment. "Boots and Saddles!"

"Boatanchors forever!"

E-mail address: mbendror@villagenet.com

Date: Fri, 23 Oct 1998 21:31:43 -0700 (PDT)
From: John Kolb <jlkolb@cts.com>
To: Old Tube Radios <boatanchors@theporch.com>
cc: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Re S-20R
Message-ID: <Pine.SC0.3.91.981023213101.5813F-100000@sd.cts.com>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

On Thu, 22 Oct 1998, philip mccooy wrote:

> Good receiver. I think it's better than the S-40 which replaced it.
>
Ah, but the S-40 and S-40A were much better looking :)

Ducking and running,

John

Date: Fri, 23 Oct 1998 21:38:52 -0700 (PDT)
From: John Kolb <jlkolb@cts.com>
To: Old Tube Radios <boatanchors@theporch.com>
cc: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Dexters RAO-? I.D.
Message-ID: <Pine.SC0.3.91.981023210952.5813C-100000@sd.cts.com>
MIME-Version: 1.0
Content-Type: TEXT/PLAIN; charset=US-ASCII

On Thu, 22 Oct 1998, steve wrote:

> Thanx, then you would say that it is a 6? BTW, mine has the cutout
> for the S-meter but it is absent and an escutcheon covers the hole.

Yes, yours sounds like a -6 from what I remember you saying about it.

Meters - There was a real shortage of meters during WW II. The
RCA AR-88's were mostly sold without meters, for example. I
expect the meters were deleted from the RAO-6 for the same reason.

> Hope to find all 3 covers soon, any ideas for a source?

I bought my RAO (still unknown version :) for \$5 at an electronic swap meet, having no idea what it was, but figuring I'd pull out the S-meter, as someone on BA would want it. Saw the moving coils and knew I had to at least try to get it working. (\$100 later for tubes, manuals, caps, etc, and it works great). You'll have to find covers the same way - from someone who has a junker they are stripping. Post wanted msgs on the several places on the internet it's suitable - boatanchors@theporch.com and the newsgroups rec.radio.amatuer.boatanchors, rec.radio.swap, rec.antiques.radio+phono. Repeat occasionally, no more than once a month, and you might find one eventually.

John KK6IL

From: Henry van Cleef <vancleef@netcom.com>
Message-Id: <199810240533.WAA23332@netcom13.netcom.com>
Subject: Re: HALLI S-20R
To: Old Tube Radios <boatanchors@theporch.com>
Date: Fri, 23 Oct 1998 23:33:32 -0600 (MDT)
Cc: boatanchors@theporch.com
MIME-Version: 1.0
Content-Type: text/plain; charset=US-ASCII
Content-Transfer-Encoding: 7bit

As JOHN SEHRING discourses

>
> To: boatanchors@theporch.com
>
> Any opinions & experience with a Halli S-20R Sky Champion? I just acquired
> one. Reasonable value for one in only fair condition visually?
>
> I'll be powering it up very carefully, using unusual precautions (all
> tubes pulled, pwr xfmr resistance check, HV caps disconnected, tubes
> inserted selectively, etc.) as it's so old. Not restored, all original
> parts but probably working last time it was used, a long time ago I'd say.
>
Same class as the S-40, which replaced it, but my recollection is that it is a much better radio. Major electrical difference is use of 6K8 vs. 6SA7. Very straightforward design.

Drawbacks: front end coils, cheap bandswitch. Getting it running: check wax paper condensers for leakage, resistors for resistor rot (more than 20% off nominal value). Pay particular attention to the cathode bias resistors in the RF/IF stages, condition of coupling cap to audio output tube, output tube cathode resistor. Make sure the output tube is really idling at or below 50 ma. cathode current (this

will take out power supply stuff if current is too high). Make sure initial bias on RF/IF stages is not too high (nominal 3 volts between grid and cathode with no signal).

Watch out for deteriorated wiring insulation, and replace if necessary. Set has a lot of real estate for its complexity, so wiring and components are generally accessible (what passes for a "coil box" isn't so easy to get at).

Value is the usual anybody's guess. For one in good shape, I'd guess \$100 tops. For a complete set needing rebuild, half that; less if physically beat up.

Don't expect performance on the highest band. 6K8 good for about 24 Mhz. My recollection is that this set used low oscillator on the high band---watch out when doing alignment.

Odds 'n mods: Not much. 6K8 wants all the bypassing it can get in the oscillator plate and mixer screen circuits. You can use 1 or 2 mike electrolytic in parallel with .02 mylar in these circuits in place of original to good effect (problem is flutter and instability). Original S-meter add-ons hard to find, need a backwards meter. You can rerig the thing to use a cathode bridge circuit and a 100 or 200 microamp regular meter. If you really want to (I wouldn't) you can use a 6SG7 for the RF amp in the S-40 circuit----make sure you put the S-40 squeal stopper resistors in and check socket wiring so that you aren't shorting the cathode to ground via the suppressor. After you've discovered that it doesn't do much, you can plug the 6SK7 back in.

Probably one of Hallicrafters' better designs that is not bad in execution. Just remember that it honestly sold for about 1/3rd the price of an RME-69 or NC-100A and isn't going to pretend to perform on a par with them.

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Hank van Cleef

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End of BOATANCHORS Digest 2272
